

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-119 (Canceled).

120. (New) A composition comprising trichloroisocyanuric acid, an alcohol selected from the group consisting of primary and secondary alcohols, a base, and a compound of formula R_1SR_2 , wherein R_1 and R_2 are each independently $-(C_1-C_{20})$ alkyl, $-(C_3-C_8)$ cycloalkyl or -phenyl.

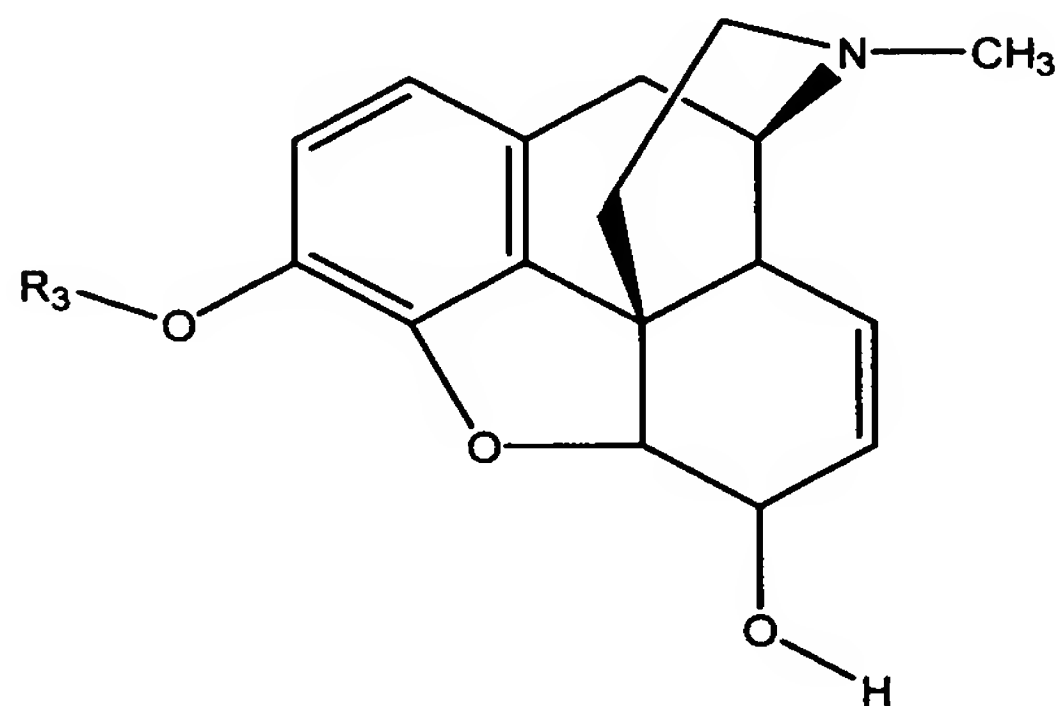
121. (New) The composition of claim 1, wherein R_1 is $-CH_3$ and R_2 $-(C_{12})$ alkyl.

122. (New) The composition of claim 1, wherein the amount of the compound of formula R_1SR_2 ranges from about 1.0 to about 9.0, from about 2.0 to about 5.0, or from about 2.5 to about 3.5 molar equivalents per molar equivalent of trichloroisocyanuric acid.

123. (New) The composition of claim 120, wherein the base is an organic amine selected from the group consisting of triethylamine, diisopropylethylamine, pyridine, dimethylpyridine, and dimethylaminopyridine.

124. (New) The composition of claim 120, wherein the amount of base ranges from about 1.0 to about 15.0, from about 2 to about 10.0, or from about 2.5 to about 7.0 molar equivalents per molar equivalent of trichloroisocyanuric acid.

125. (New) The composition of claim 120, wherein the secondary alcohol has formula (I):



(I),

wherein R₃ is a protecting group.

126. (New) The composition of claim 125, wherein R₃ is -(C₁-C₁₀)alkyl, -benzyl, -C(O)(C₁-C₁₀)alkyl, -C(O)O(C₁-C₁₀)alkyl, -Si((C₁-C₁₀)alkyl)₃, -Si(aryl)((C₁-C₁₀)alkyl)₂, -Si(aryl)₂((C₁-C₁₀)alkyl), -P(O)((C₁-C₁₀)alkyl)₂, -P(S)((C₁-C₁₀)alkyl)₂, or -S(O)OC₆H₄-*p*-CH₃.

127. (New) The composition of claim 126, wherein R₃ is -CH₃ or -Si(CH₃)₂(C(CH₃)₃).

128. (New) The composition of claim 120, wherein the amount of the alcohol ranges from about 1.0 to about 9.0, from about 2.0 to about 5.0, or from about 2.0 to about 4.0 molar equivalents per molar equivalent of trichloroisocyanuric acid.

129. (New) The composition of claim 120 further comprising an organic solvent selected from the group consisting of benzene, toluene, xylene, mesitylene, chlorobenzene, dichloromethane, chloroform, carbon tetrachloride, dichloroethane, diethyl ether, dipropyl ether, di-butyl ether, methyl-tert-butyl ether, tetrahydrofuran, methyltetrahydrofuran, ethyl acetate, and combination thereof.

130. (New) A method for making a ketone, comprising allowing a secondary alcohol to react in the presence of a compound of formula R₁SR₂, trichloroisocyanuric acid and a base under conditions sufficient to make the ketone, wherein R₁ and R₂ are each independently -(C₁-C₂₀)alkyl, -(C₃-C₈)cycloalkyl or -phenyl.

131. (New) The method of claim 130, wherein R₁ is -CH₃ and R₂ is -(C₁₂)alkyl.

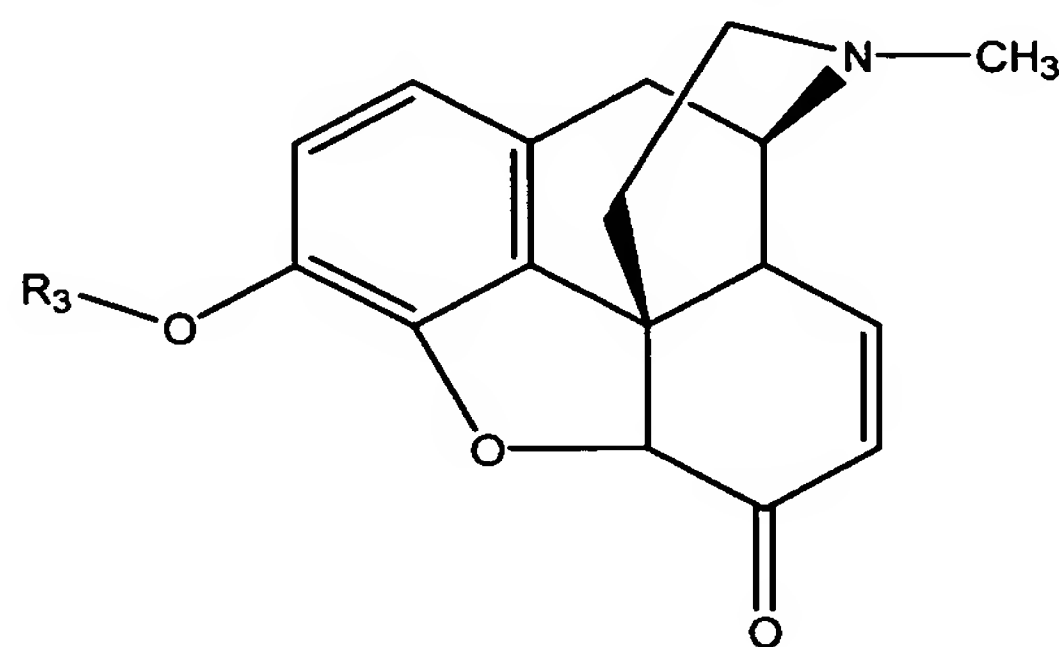
132. (New) The method of claim 130, wherein the amount of the compound of formula R₁SR₂ ranges from about 1.0 to about 9.0, from about 2.0 to about 5.0, or from about 2.5 to about 3.5 molar equivalents per molar equivalent of trichloroisocyanuric acid.

133. (New) The method of claim 130, wherein the base is an organic amine selected from the group consisting of triethylamine, diisopropylethylamine, pyridine, dimethylpyridine or dimethylaminopyridine.

134. (New) The method of claim 130, wherein the amount of base ranges from about 1.0 to about 15.0, from about 2.0 to about 10.0, or from about 2.5 to about 7.0 molar equivalents per molar equivalent of trichloroisocyanuric acid.

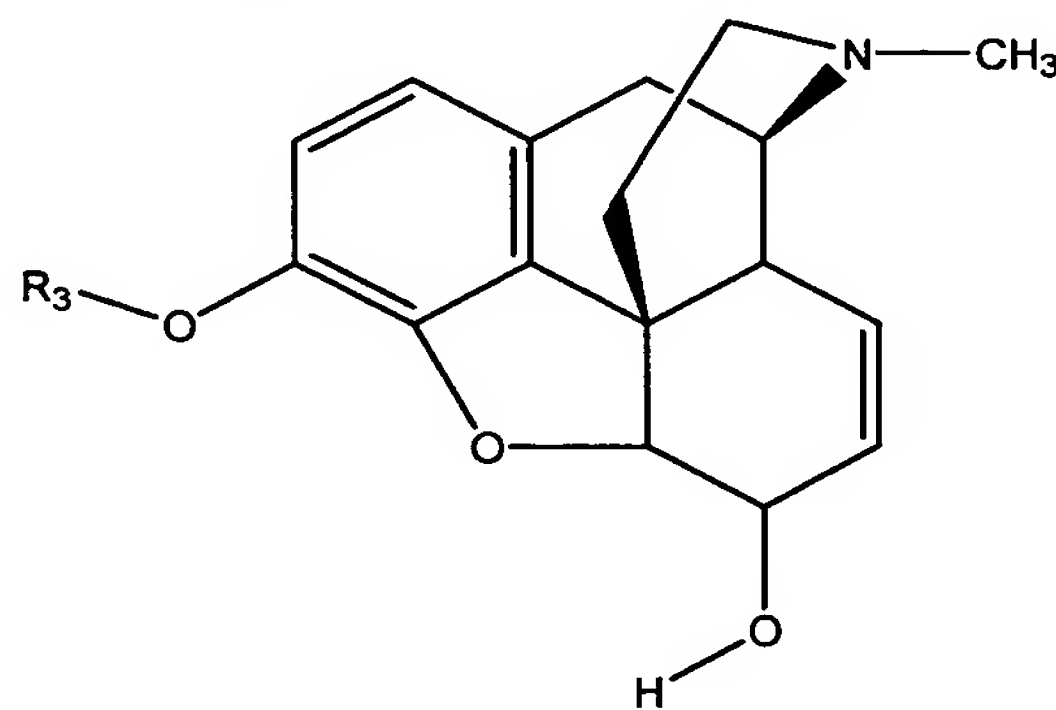
135. (New) A method for making an aldehyde, comprising allowing a primary alcohol to react in the presence of a compound of formula R_1SR_2 , trichloroisocyanuric acid and a base under conditions sufficient to make the aldehyde, wherein R_1 and R_2 are each independently $-(C_1-C_{20})$ alkyl, $-(C_3-C_8)$ cycloalkyl or -phenyl.

136. (New) A method for making a compound of formula (II):



(II)

comprising, allowing a compound of formula (I):



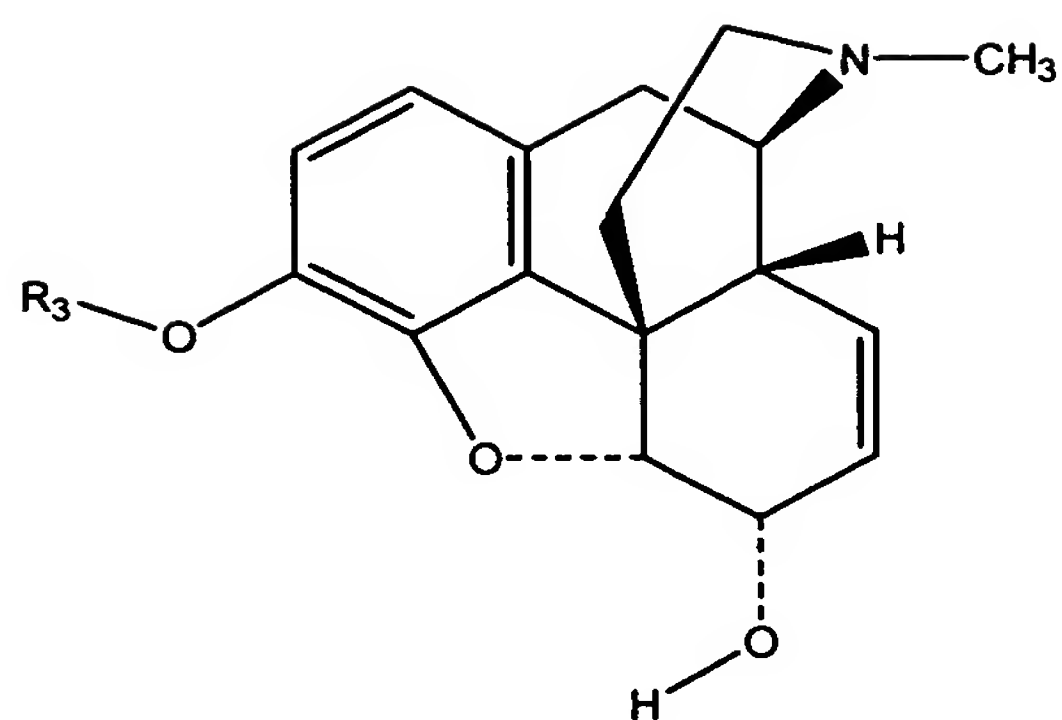
(I),

to react in the presence of a compound of formula R_1SR_2 and a chlorine-containing reagent under conditions sufficient to make the compound of formula (II); wherein

R_1 and R_2 are each independently $-(C_1-C_{20})$ alkyl, $-(C_3-C_8)$ cycloalkyl or -phenyl; and

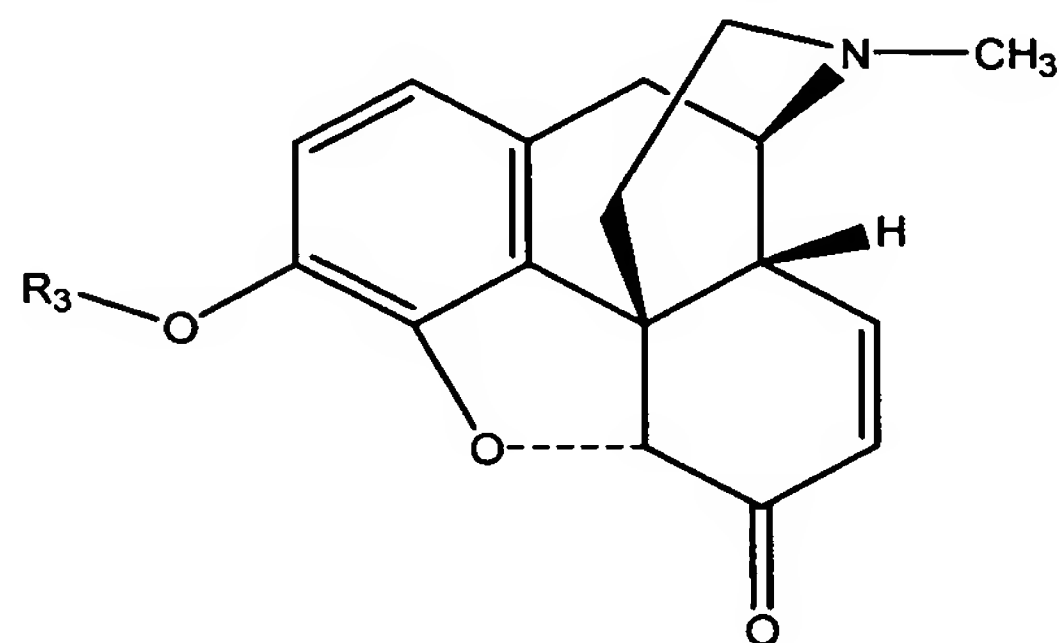
R_3 is a protecting group.

137. (New) The method of claim 136, wherein the compound of formula (I) is a compound of formula (Ia):



(Ia),

and the compound of formula (II) is a compound of formula (IIa):



(IIa).

138. (New) The method of claim 136, wherein R_3 is $-(C_1-C_{10})$ alkyl, -benzyl, $-C(O)(C_1-C_{10})$ alkyl, $-C(O)O(C_1-C_{10})$ alkyl, $-Si((C_1-C_{10})alkyl)_3$, $-Si(aryl)((C_1-C_{10})alkyl)_2$, $-Si(aryl)_2((C_1-C_{10})alkyl)$, $-P(O)((C_1-C_{10})alkyl)_2$, $-P(S)((C_1-C_{10})alkyl)_2$, or $-S(O)OC_6H_4-p-CH_3$.

139. (New) The method of claim 138, wherein R_3 is $-CH_3$ or $-Si(CH_3)_2(C(CH_3)_3)$.

140. (New) The method of claim 136, wherein the chlorine-containing reagent is trichloroisocyanuric acid, N-chlorosuccinimide, sodium dichloroisocyanurate, 1,3-dichloro-5,5-dimethylhydantoin, Cl_2 , calcium hypochlorite, or any mixture thereof.

141. (New) The method of claim 136, wherein the amount of the compound of formula (I) ranges from about 1.0 to about 9.0, from about 2.0 to about 5.0, or from about 2.0 to about 4.0 molar equivalents per molar equivalent of the chlorine-containing reagent.

142. (New) The method of claim 136, wherein R_1 is $-CH_3$ and R_2 is $-(C_{12})$ alkyl.

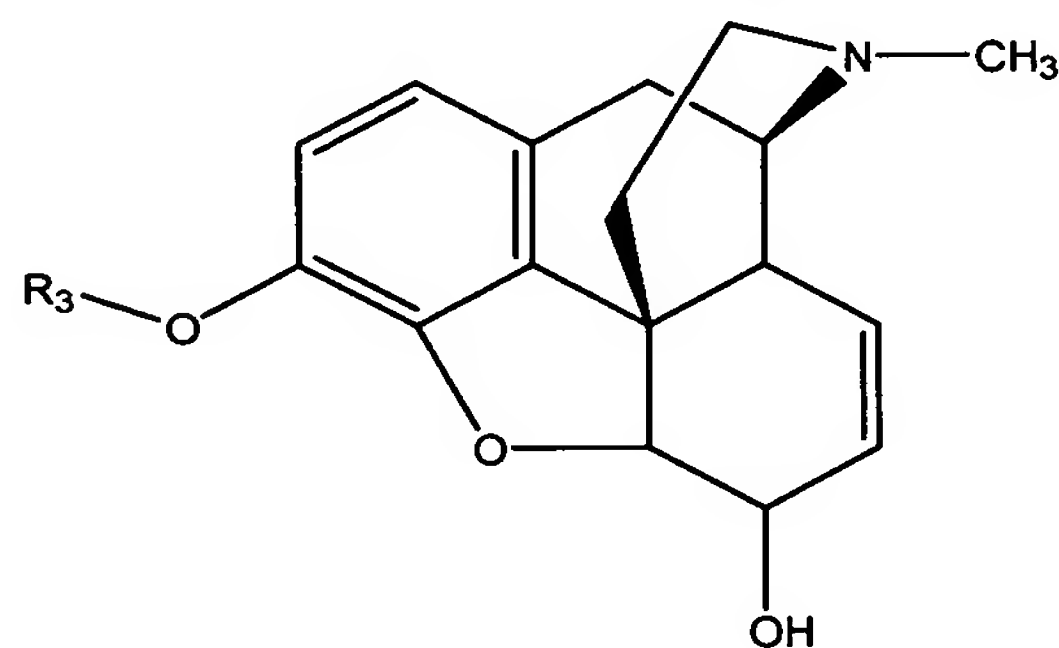
143. (New) The method of claim 136, wherein the amount of the compound of formula R_1SR_2 ranges from about 1.0 to about 9.0, from about 2.0 to about 5.0, or from about 2.5 to about 3.5 molar equivalents per molar equivalent of the chlorine-containing reagent.

144. (New) The method of claim 136, further comprising the use of a base.

145. (New) The method of claim 144, wherein the base is an organic amine selected from the group consisting of triethylamine, diisopropylethylamine, pyridine, dimethylpyridine and dimethylaminopyridine.

146. (New) The method of claim 144 wherein the amount of base ranges from about 1.0 to about 15.0, from about 2.0 to about 10.0, or from about 2.5 to about 7.0 molar equivalents per molar equivalent of the chlorine-containing reagent.

147. (New) A composition comprising a compound of formula (I):



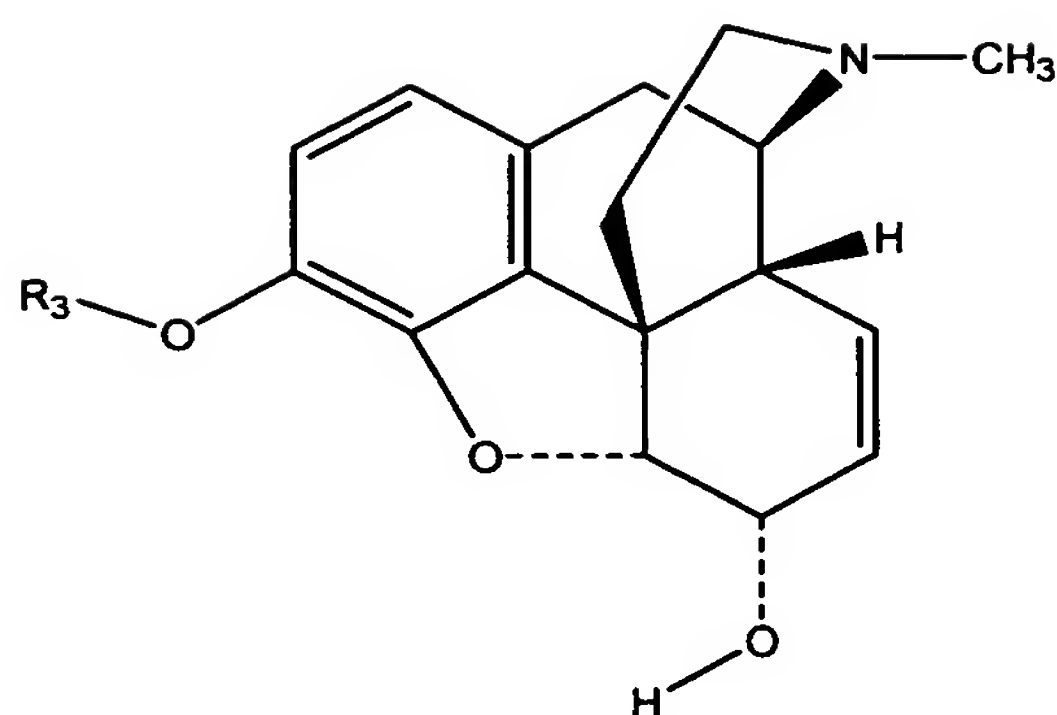
(I),

a compound of formula R_1SR_2 and a chlorine-containing compound; wherein

R_1 and R_2 are each independently $-(C_1-C_{20})$ alkyl, $-(C_3-C_8)$ cycloalkyl or -phenyl; and

R_3 is a protecting group.

148. (New) The composition of claim 147, wherein the compound of formula (I) is a compound of formula (Ia):



(Ia).

149. (New) The composition of claim 147, wherein the chlorine-containing reagent is trichloroisocyanuric acid, N-chlorosuccinimide, sodium dichloroisocyanurate, 1,3-dichloro-5,5-dimethylhydantoin, Cl_2 , calcium hypochlorite, or any mixture thereof.

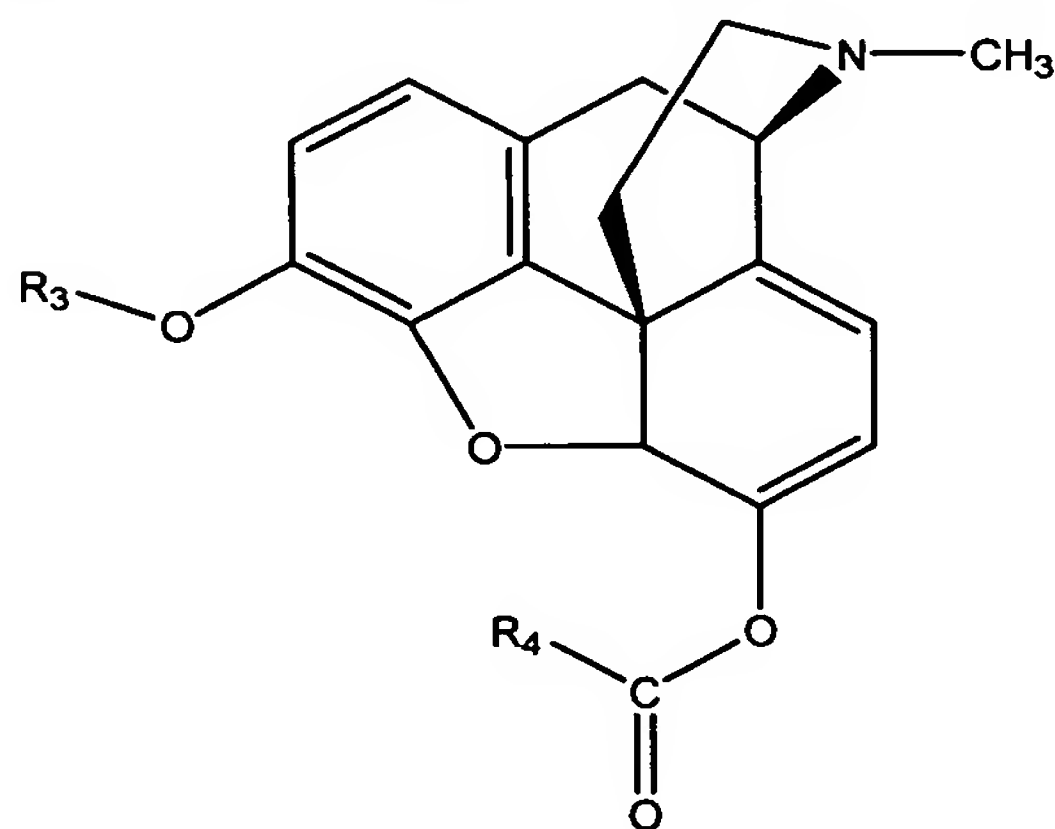
150. (New) The composition of claim 147, wherein R_3 is $-(\text{C}_1\text{-C}_{10})\text{alkyl}$, $-\text{benzyl}$, $-\text{C}(\text{O})(\text{C}_1\text{-C}_{10})\text{alkyl}$, $-\text{C}(\text{O})\text{O}(\text{C}_1\text{-C}_{10})\text{alkyl}$, $-\text{Si}((\text{C}_1\text{-C}_{10})\text{alkyl})_3$, $-\text{Si}(\text{aryl})((\text{C}_1\text{-C}_{10})\text{alkyl})_2$, $-\text{Si}(\text{aryl})_2((\text{C}_1\text{-C}_{10})\text{alkyl})$, $-\text{P}(\text{O})((\text{C}_1\text{-C}_{10})\text{alkyl})_2$, $-\text{P}(\text{S})((\text{C}_1\text{-C}_{10})\text{alkyl})_2$, or $-\text{S}(\text{O})\text{OC}_6\text{H}_4\text{-}p\text{-CH}_3$.

151. (New) The composition of claim 150, wherein R_3 is $-\text{Si}(\text{CH}_3)_2(\text{C}(\text{CH}_3)_3)$ or $-\text{CH}_3$.

152. (New) The composition of claim 147 further comprising a base.

153. (New) The composition of claim 147 further comprising an organic solvent.

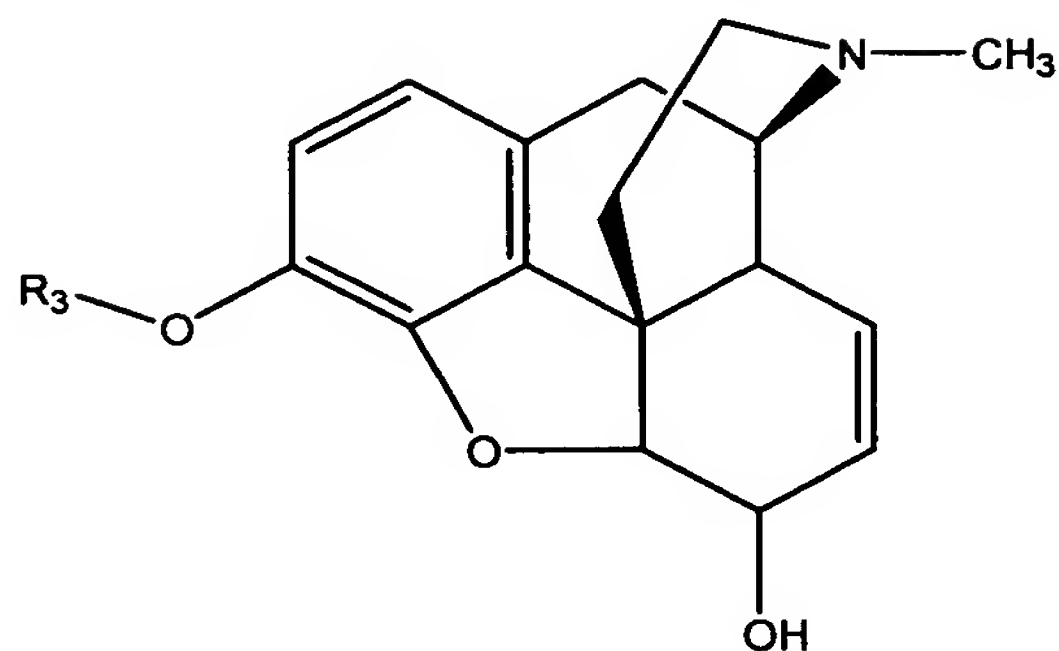
154. (New) A method for making a compound of formula (III):



(III),

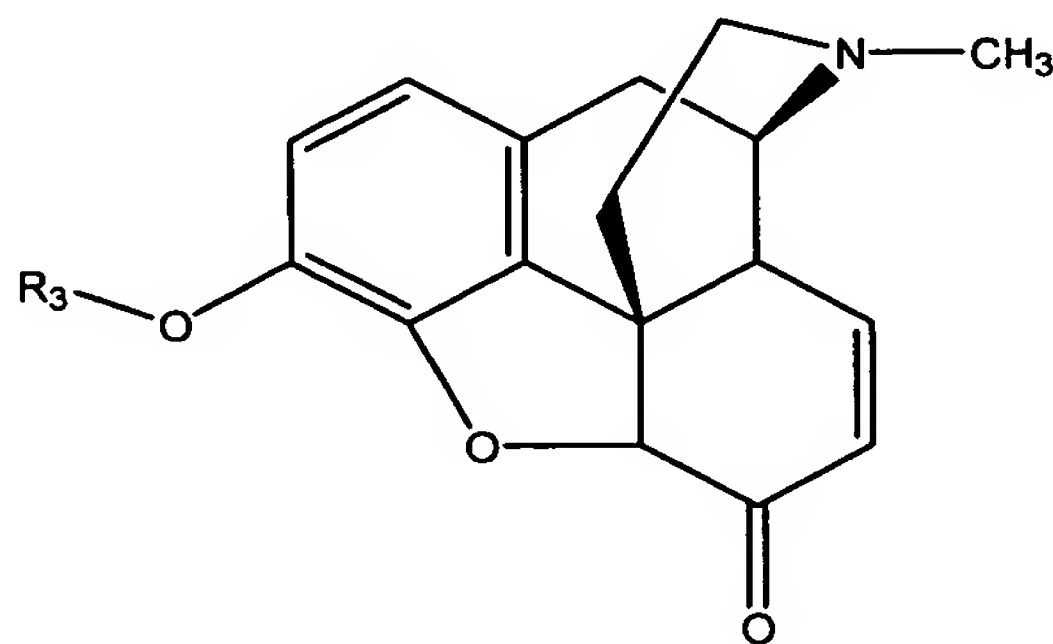
comprising:

(a) allowing a compound of formula (I):



(I)

to react in the presence of a compound of formula R₁SR₂ and a chlorine-containing reagent under conditions sufficient to make a compound of formula (II):



(II);

and

(b) allowing the compound of formula (II) to react with a first base and an acylating agent of formula R₄C(O)OC(O)R₄ or R₄C(O)X under conditions sufficient to make the compound of formula (III), wherein:

R₁ and R₂ are each independently -(C₁-C₂₀)alkyl, -(C₃-C₈)cycloalkyl or -phenyl;

R₃ is a protecting group;

R₄ is -(C₁-C₁₀)alkyl; and

X is -Cl, -Br or -I.

155. (New) The method of claim 154, wherein R₃ is -(C₁-C₁₀)alkyl, -benzyl, -C(O)(C₁-C₁₀)alkyl, -C(O)O(C₁-C₁₀)alkyl, -Si((C₁-C₁₀)alkyl)₃, -Si(aryl)((C₁-C₁₀)alkyl)₂, -Si(aryl)₂((C₁-C₁₀)alkyl), -P(O)((C₁-C₁₀)alkyl)₂, -P(S)((C₁-C₁₀)alkyl)₂, or -S(O)OC₆H₄-*p*-CH₃.

156. (New) The method of claim 155, wherein R₃ is -Si(CH₃)₂(C(CH₃)₃) or -CH₃.

157. (New) The method of claim 154, wherein the chlorine-containing reagent is trichloroisocyanuric acid, N-chlorosuccinimide, sodium dichloroisocyanurate, 1,3-dichloro-5,5-dimethylhydantoin, Cl_2 , calcium hypochlorite, or any mixture thereof.
158. (New) The method of claim 154, wherein the amount of the compound of formula (I) ranges from about 1.0 to about 9.0, from about 2.0 to about 5.0, or from about 2.0 to about 4.0 molar equivalents per molar equivalent of the chlorine-containing reagent.
159. (New) The method of claim 154, wherein R_1 is $-\text{CH}_3$ and R_2 is $-(\text{C}_{12})\text{alkyl}$.
160. (New) The method of claim 154, wherein the amount of the compound of formula R_1SR_2 ranges from about 1.0 to about 9.0, from about 2.0 to about 5.0, or from about 2.5 to about 3.5 molar equivalents per molar equivalent of the chlorine-containing reagent.
161. (New) The method of claim 154, wherein step (a) further comprises the use of a second base.
162. (New) The method of claim 161, wherein the second base is an organic amine selected from the group consisting of triethylamine, diisopropylethylamine, pyridine, dimethylpyridine or dimethylaminopyridine.
163. (New) The method of claim 161, wherein the amount of second base ranges from about 1.0 to about 15.0, from about 2.0 to about 10.0, or from about 2.5 to about 7.0 molar equivalents per molar equivalent of the chlorine-containing reagent.
164. (New) The method of claim 154, wherein the first base is an organic amine selected from the group consisting of triethylamine, diisopropylethylamine, pyridine, dimethylpyridine or dimethylaminopyridine.
165. (New) The method of claim 154, wherein the acylating agent is $-\text{CH}_3\text{C}(\text{O})\text{OC}(\text{O})\text{CH}_3$.
166. (New) The method of claim 154, wherein the acylating agent is $\text{CH}_3\text{C}(\text{O})\text{Cl}$.

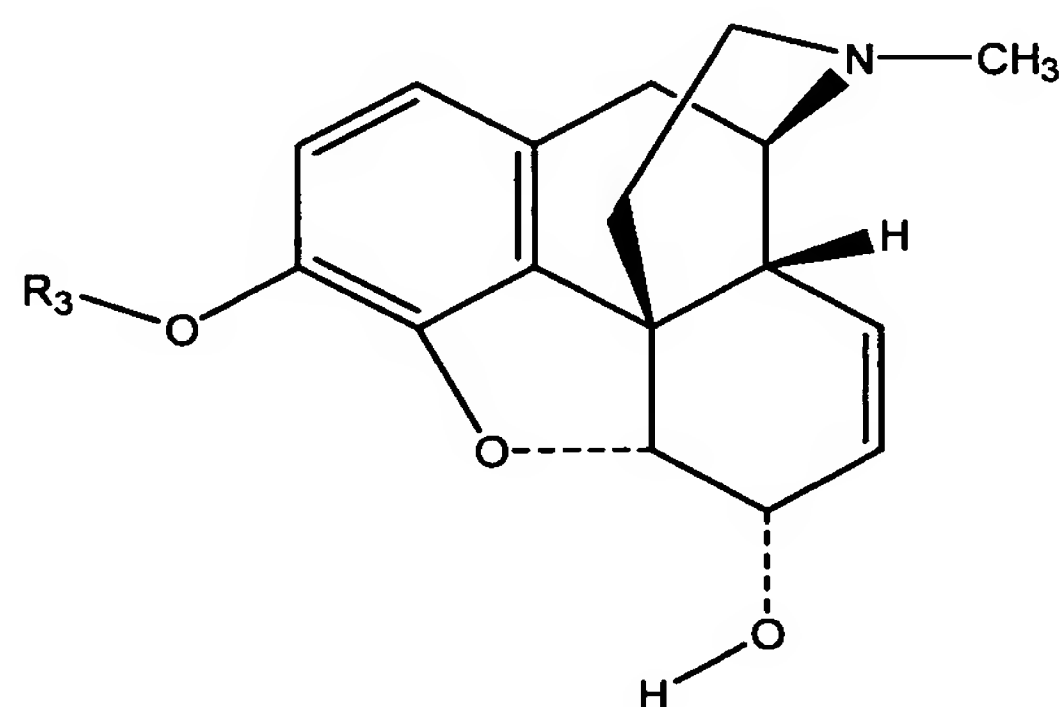
167. (New) The method of claim 154, wherein the amount of the first base ranges from about 1 to about 10, from about 2 to about 7, or from about 3 to about 6 molar equivalents per molar equivalent of the acylating agent.

168. (New) The method of claim 154, wherein the amount of the acylating agent ranges from about 1 to about 15, from about 1 to about 10, or from about 2 to about 7 molar equivalent per molar equivalent of the compound of formula (II).

169. (New) The method of claim 161, wherein the first base and the second base are the same.

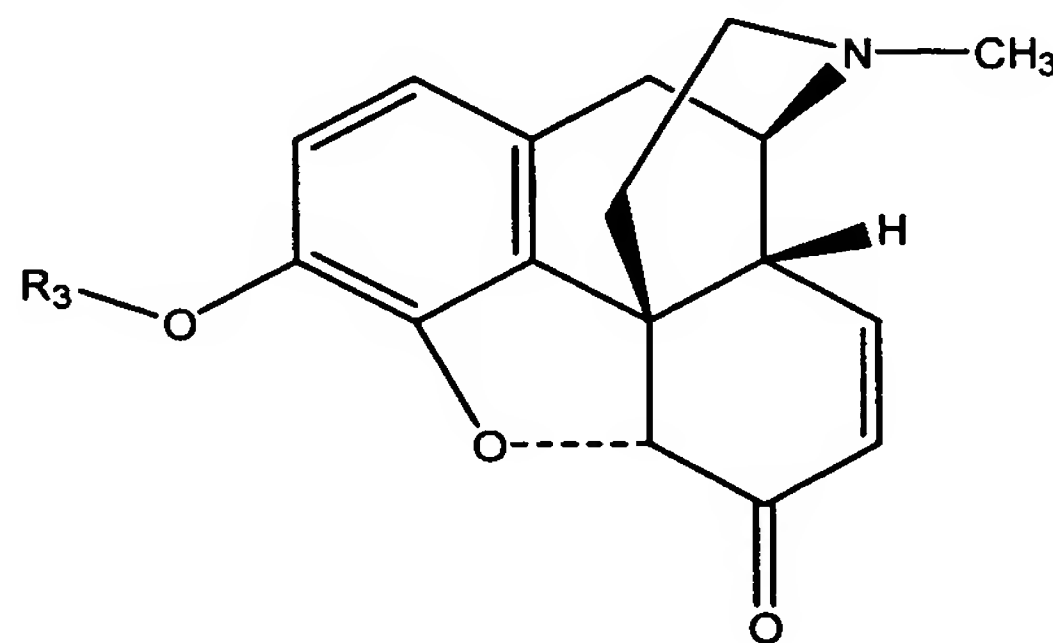
170. (New) The method of claim 154, wherein step (a) further comprises isolating the compound of formula (II) prior to carrying out step (b).

171. (New) The method of claim 154, wherein the compound of formula (I) is a compound of formula (Ia):



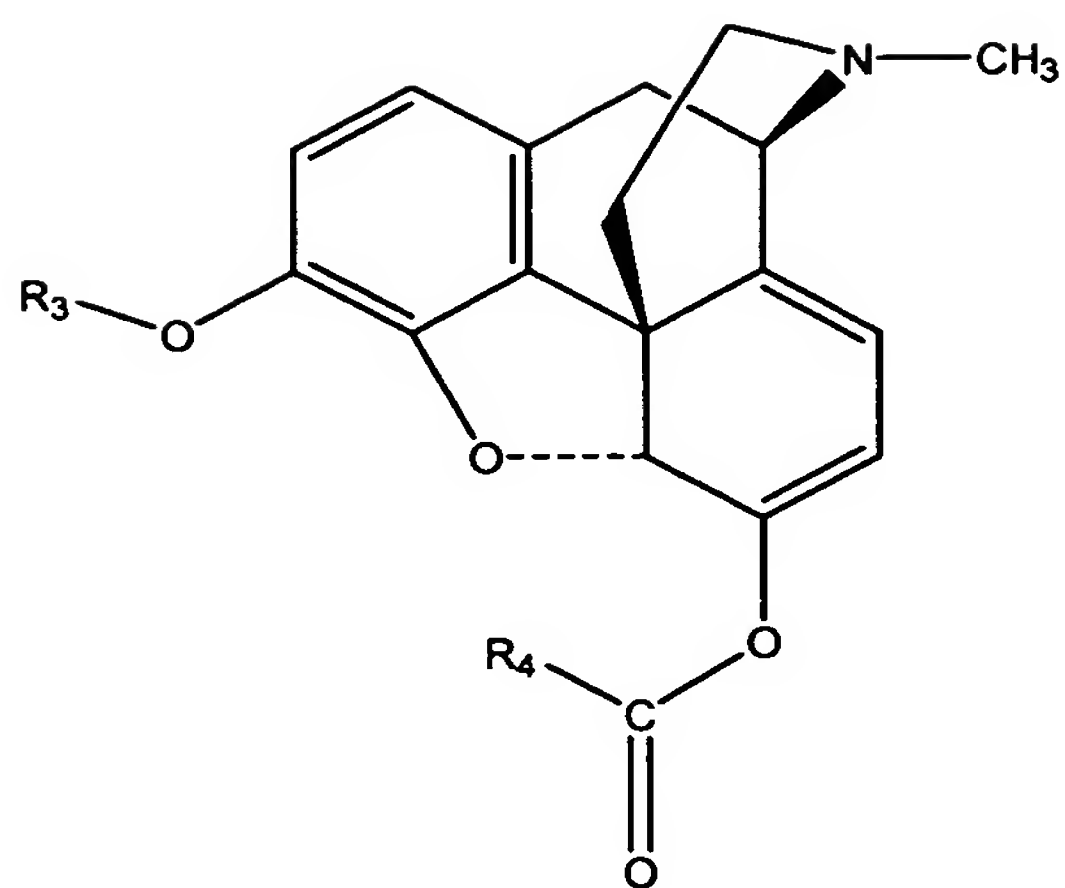
(Ia),

the compound of formula (II) is a compound of formula (IIa):



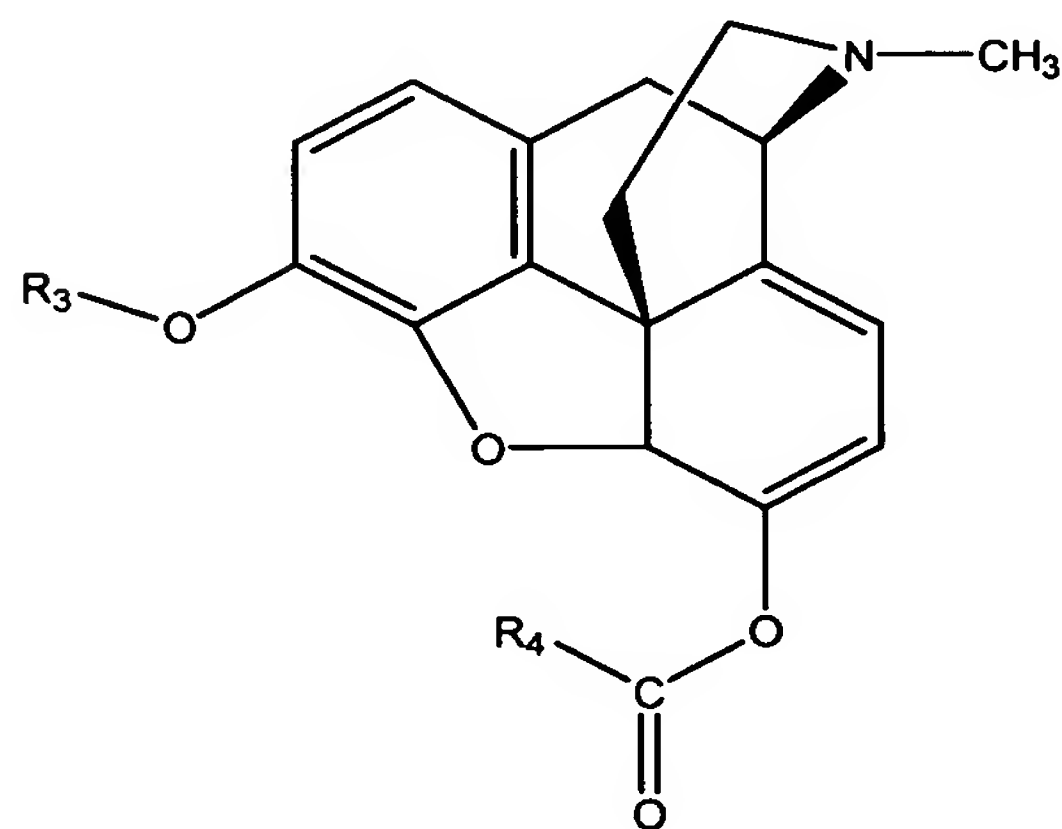
(IIa),

and the compound of formula (III) is a compound of formula (IIIa):



(IIIa).

172. (New) A compound of formula (III):



(III),

wherein:

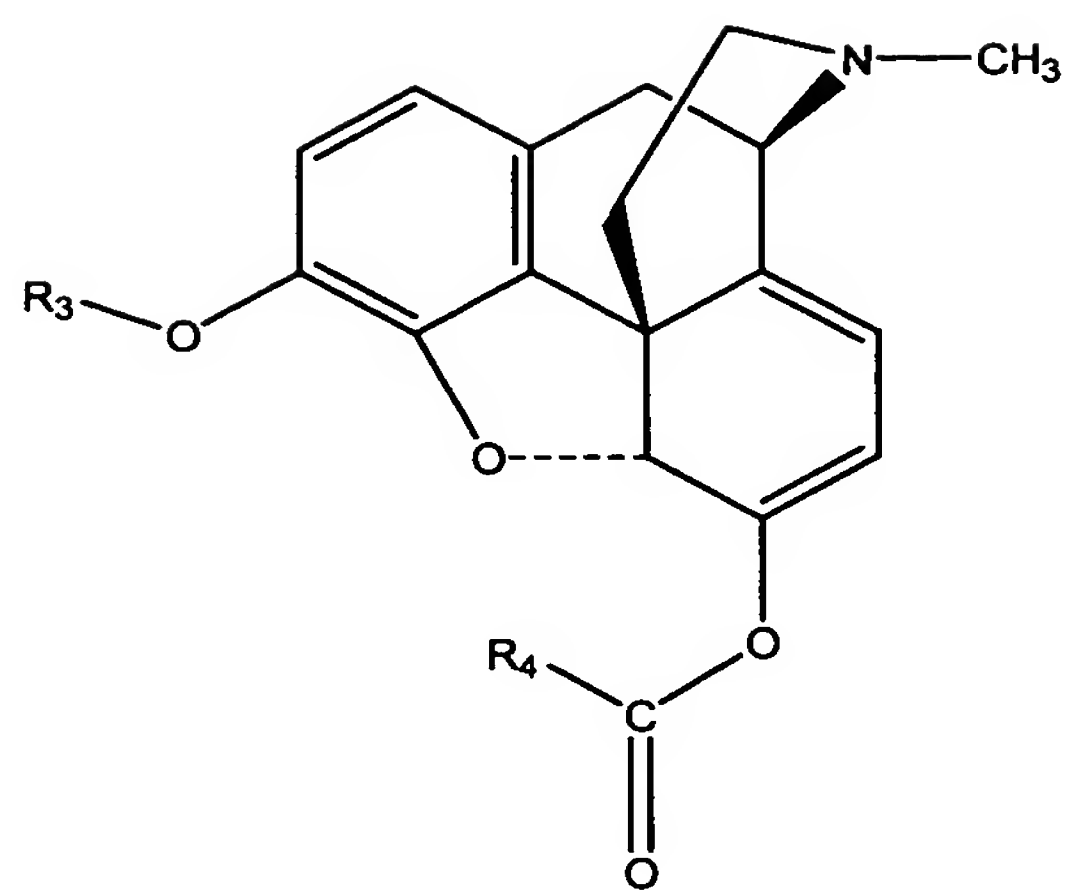
R_3 is $\text{Si}((\text{C}_1\text{-C}_{10})\text{alkyl})_3$, $-\text{Si}(\text{aryl})((\text{C}_1\text{-C}_{10})\text{alkyl})_2$, or $-\text{Si}(\text{aryl})_2((\text{C}_1\text{-C}_{10})\text{alkyl})$; and

R_4 is $-(\text{C}_1\text{-C}_{10})\text{alkyl}$.

173. (New) The compound of claim 172, wherein R_3 is $-\text{Si}(\text{CH}_3)_2(\text{C}(\text{CH}_3)_3)$.

174. (New) The compound of claim 172, wherein R_4 is $-\text{CH}_3$.

175. (New) The compound of claim 172, wherein the compound of formula (III) is a compound of formula (IIIa):



(IIIa).